meter. Three out of four specimens subsequently examined contained within the abdomen similar sporcs. No traces of mycelium were visible; the plants had come to maturity, fruited, and withered away, leaving only the spores.

The chief question then remaining to be solved was as to the time when the spores were developed, whether before or after the death of the bees. In order, if possible, to determine this, I placed four of the dead bees in circumstances favourable for the germination of the spores, and in about ten days I submitted them again to examination. They were covered with mould, consisting chiefly of a species of *Mucor*, and one also of *Botrytis* or *Botryosporium*. These fungi were clearly extraneous, covering indifferently all parts of the insects, and spreading on the wood on which they were lying. On the abdomen of all the specimens, and on the clypeus of one of them, grew a fungus wholly unlike the surrounding mould. It was white and very short, and apparently consisted entirely of spores, arranged in a moniliform manner, like the filaments of a stemless *Penicillium*. These spores resembled those found in the abdomen of the bees, and, I think, proceeded from them. The filaments were most numerous at the junction of the segments. The spores did not, I think, resemble the globules in *Sporendonema muscæ* of the English flora, neither were they apparently enclosed.

The Rev. M. J. Berkeley, to whom I sent some of the bees, found, by scraping the interior of the abdomen with a lancet, very minute, curved, linear bodies, which he compares to Vibrios. He also found, mixed with them, globular bodies, but no visible stratum of mould.

From the peculiar position of the spores within the abdomen of the bees, and from the growth of a fungus from them unlike any of our common forms of *Mucedines*, I think it probable that the death of the bees was occasioned by the presence of a parasitic fungus.—*Proc. Lit. and Phil. Soc. of Liverpool*, Session 1857–58.

On a new species of Toucan. By Mr. J. Gould.

Andigena spilorhynchus.

Crown of the head and back of the neck glossy black; back, wing-coverts, and margins of the primaries dull sienna-brown; secondaries bluish brown; upper tail-coverts blue strongly tinged with green; tail slaty blue tinged with green, the four central feathers largely tipped with chestnut; band across the rump sulphur-yellow; throat and cheeks white, blending into the light blue of the breast and abdomen; thighs rich chestnut; under tail-coverts blood-red; feet greenish blue, with a lilac tinge on their under surface; bill black, with a mark of obscure brownish red at the base of the upper mandible, which, when viewed in front, much resembles the letter W, this colour advancing for a short distance on each side of the culmen and extending down the sides of the base.

Total length, 18 inches; bill, $3\frac{3}{4}$; wing, 7; tail, $7\frac{1}{2}$; tarsi, $1\frac{3}{4}$.

Hab. Forest of Beza, on the eastern side of the Cordillera in Ecuador.—*Proc. Zool. Soc.* March 23, 1858.